Amendments to the Specification:

1) Please replace the first full paragraph on page 2 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

Igniting the conduction through the gas requires a special device (called Starter) connecting the heating filaments directly one to the other, in parallel with the gas medium (see Fig.1, low section). The starter may consist of a filament bulb including a switch reacting to temperature opened at normal temperature. When the power is applied to the circuit, the current starter bulb lights on and internal temperature goes up rapidly while the cathodes of the fluorescent tube are incandescent. When the temperature is high enough, the switch closes, short cutting the starter which rapidly decreases in temperature and thus opens again the switch. This sudden interruption causes the current to induce a high voltage surge at the coil's outputs (self induction effect) thereby producing an igniting conduction between the two cathodes, through the mercury vapor heated by the incandescent filaments. From this point, the starter is ~~no more~~ not activated as long as the conduction of the vapor remains. The filaments of the cathodes stay incandescent due to their construction and position that drive a part of the current crossing the tube to flow through their surface also hit by mercury ions that help to maintain temperature by dissipating collision energy.

2) Please replace the second full paragraph on page 4 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

Above benefits are obtained by operating fluorescent luminaries ~~the~~ in a way disclosed in the present invention~~, such~~. Such luminaries ~~including~~ include one or more standard fluorescent tubes that contain mercury vapor gas and heating filament cathodes at both ends, a fixture that integers proper holding and connection devices for the fluorescent

tubes, and one ballast for driving the fluorescent tubes. Ballast operating mode differs from existing systems by the fact that it uses voltage pulses applied to the electrodes for exciting the fluorescent gas, such pulses consisting of non periodic voltage levels separated by variable duration dead times.

3) Please replace the first full paragraph on page 5 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

In a preferred implementation, the ballast can communicate with ~~an~~ a control unit through a wired or wireless link for performance monitoring and remote failure detection.

4) Please replace the fifth full paragraph on page 5 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

It is particularly appropriate when many luminaries are used in a single place that the ballasts have an on line or wireless link with a central control unit, for performance monitoring and remote failure detection.

5) Please replace the second full paragraph on page 6 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

The invention is also presented under a third form, namely as a voltage supply signal for the fluorescent tubes in normal operating condition, ~~which~~ with the signal being formed of pulses characterized by including non periodic voltage levels separated by variable length dead times. Preferably, the signal pulses are of alternative nature i.e. the signal

includes equal amplitudes of positive and negative polarity.

6) Please replace the second eighth full paragraph on page 6 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

Figure 1 in appendix represents the simplest shape of a magneto-inductive type ballast 2 in series with a fluorescent tube 14, in which the electric main voltage supplies the tube 1 with a frequency of 50 or 60 Hz. This kind of ballast, with possibly some minor evolutions, are mostly used in today luminaries. Although some manufacturers are seeking to market new electronic ballasts ~~since a while,~~ because luminaries equipped with such electronic ballasts have higher costs that significantly restrain a broad diffusion of these technologies.

7) Please replace the second and third full paragraphs on page 7 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

Figure 2 schematically represents the action of the new ballast 12 designed with the invention 10. The operation of a fluorescent tube 14 equipped with conventional magnetic ballast 2 is illustrated in figure 1. ~~the upper part of figure 2. It shows that~~ Figure 1 shows the excitation of mercury atoms 3 by the collision of an electron 4 flowing between the pre-heating electrodes 16 occurs randomly and relatively seldom (cf the only collision represented inducing light radiation).

~~At the opposite, the bottom of figure~~ Figure 2 represents the action of the new ballast 12 working with voltage levels of a very different nature. The latter induces much more collisions and consequently excites more mercury atoms. This phenomenon is illustrated on ~~the~~ figure 2 by three collisions leading to higher ultraviolet radiation 5. The

efficiency increases from the standard level of 65 lumens per unit of power (Watt) for the conventional magnetic ballast 2 to a value of 120 lumens per Watt by using the new ballast 12 from the invention.

8) Please replace the fourth full paragraph on page 8 with the following replacement paragraph. A marked version of the replacement paragraph is provided herewithbelow in compliance with 37 CFR 1.121(b)(1)(ii). No new matter has been included in the replacement paragraph.

The new connectors 18 include preferably special coupling devices 20, wherein the new ballast can be activated to short cut the filaments of the cathodes in order to void any current flow through them and thus cancel losses of voltage.